

Developing the information skills agenda

Irene Ordidge

Department of Learning Resources

(Project group members: Sue Davidson; Helen Gale; Lynda Holland, Vince McNutt, Mil Millington; Sue Penzig; Lisa Thompson)

Background and rationale

Technological advances by the database creators of the late 60's and early 70's enabled the 'information explosion' to be managed and accessed. Information professionals developed specialist skills to explore these bibliographic resources on-line. A decade later, as attitudes changed and resources became more accessible, a parallel agenda of user education programmes was being developed by librarians. The information skills agenda took shape across schools, colleges and Higher Education institutions and a skills hand-over began.

The curriculum focussed on access to print resources initially to support the shift to resource-based and flexible learning initiatives. The rapid developments in desktop information technology in the late 80's and 90's brought the two developments closer together. It enabled information professionals, already supporting the development of user information skills, to include access to bibliographic databases and electronic resources on CD-ROM and on-line.

The research

The Information Skills Agenda project was a deskbased research project with stated aims:

- To investigate the breadth of information skills teaching already in place across the Learning Resources Department
- To test the local models against national and international models
- To agree a skill set for the University of Wolverhampton in conjunction with academic staff via school Teaching and Learning/ Quality Committees
- To develop an electronic version of the skill set for access by all students
- Work with academic staff to link the work to appropriate WOLF modules
- To support the university widening participation agenda by embedding the skills module in a wide range of student activity

The project team set out to review the current situation at the University of Wolverhampton and compare it with national and international developments to try to ensure the best way forward to support student access to resources.

The range of materials and breadth of information skills teaching already in place across the department was investigated. Materials included handouts and scripts of presentations both at inductions and later in the academic year. The team were aware that not all materials in use were collected but examples of materials were made available by staff from different Learning Centres.

In addition, a literature search was carried out to establish the range of national and international models in current practice. Documents from this search were collected and abstracted to enable access to a picture of provision both nationally and internationally. Additional information from a conference hosted by SCONUL (Society of College, National and University Libraries) was added to the documentation made available.

Local development of information skills at the University of Wolverhampton

Learning resources staff have developed a wide range of approaches to help students to find resources including printed booklets and help sheets, induction sessions, formal targetted presentations and more recently using the WOLF framework. These materials and presentations often focus on a specific resource or set of resources from the print or e-resource collections currently purchased for student use.

Staff are sometimes delivering these sessions in collaboration with academic staff, some schools allow time for the delivery of skills session and learning resources staff may offer free-standing presentations. The picture is varied from School to School and from undergraduate to postgraduate.

The main focus of the presentation is often to ensure that students become familiar with the breadth and depth offered by the resource and so are able to access and make best use of materials purchased to support their courses. Student feedback from these sessions makes it clear that they are highly valued. Recent research by Oliver Pritchard, Dudley Learning Centre Manager, has indicated not only student assessment of the value of this work, but also that tutors can detect a difference in student approaches to their assignments following attendance at these presentations

The recent development of WOLF on-line material to support students in SCIT, not traditionally heavy Learning Centre users, has begun to move into the information skills development arena and encompass a wider skill set. This includes support to evaluate materials, particularly websites, which do not have the traditional quality checkpoints carried by print material purchased by the librarians. This WOLF module has become part of a portfolio required by the school to indicate student ability in locating and accessing information.

The national information skills picture

In 1981 the British Library Research and Development Division funded Michael Marland and a group of interested parties to look at the skill set needed to support a new style of learning in schools and subsequently colleges in the UK. The work developed what was to become probably the original set of information skills. It was funded to develop a set of skills to enable pupils to manage resource based, investigative learning to replace the primarily didactic style of teaching then in place in schools.

The nine information skills emanating from this research are well documented and have been rephrased and reformed by several organisations to support the development of information retrieval and handling. It is possible to combine them and check against other models and they still offer a valuable basis for skills development.

The Marland skill set includes:

- Formulate and analyse need
- Identify and appraise likely sources
- Locate individual resources
- Examine, select and reject sources
- Interrogate resources
- Record and store information
- Interpret, analyse, synthesise
- Present, communicate
- Evaluate

These skills can be presented as above as a process model or redefined and simplified as learner questions. The first skill can be presented as 'What do I need to do?' or as a simplified statement for the user, for example, 'Decide what information is needed from the National Council for Educational Technology (NCET, 1993).

Whilst there were variations on this skill set developing slowly throughout the 1980s the pace accelerated in the 1990s as electronic information sources and data sets became available. The introduction by government of CD-ROM into schools, in the early 1990s, via school libraries, fuelled the need for information skills development both within the school and in the teacher education community in higher education. At the same time public and higher education libraries were beginning to introduce these electronic resources into institutions and library user education programmes underwent a transformation and began to include skills the needed to support use of the new media.

Over the years a number of models have developed in the UK, including the PLUS model: Purpose; Location; Use and Self-evaluation from Herring (1997) and the PGCE model: Plan; Gather; Communicate; Evaluate documented by Small (1999) and recently published in the LA Record. All of these models provide a significant introduction to information handling skills. Creanor, Durndell and Primrose (1996) provide an account of Glasgow University developing electronically delivered skill

topics using hypertext as part of the Teaching with Independent Learning Technologies (TILT) project as early as 1993. Work documented by Barry (1997) offers an overview of the interpretation of what appears to be the Marland skill set interpreted for doctoral students working in an increasingly electronic environment.

In the UK HE sector a survey in 1998 looked at World Wide Web for user education and found web based materials for 68 institutions. These varied in content but a claim was made that libraries using the Web for information skills train more students with the skill set than others. Chelin and Rhodes (2000) qualified this statement accepting that cause and effect may not be related and that it was possible that the skill set was more developed in these institutions

Recent work by SCONUL from their Task Force on Information Skills also focussed on the needs of the higher education sector. The task force published a briefing paper in 1999 offering a set of seven headline information skills for higher education. The document recommended that higher education in the UK should consider these skills in the development of their learning and teaching strategies. Basic IT skills were recognised as another skill set necessary for success and often needed in order to access higher order information skills when interrogating electronic resources. The SCONUL task force went on to recommend that the UK should look at good practice at home and abroad.

The SCONUL skill set includes:

- The ability to recognise a need for information
- The ability to distinguish ways in which the information 'gap' may be addressed
- The ability to construct strategies for locating information
- The ability to locate and access information
- The ability to compare and evaluate information obtained from different sources
- The ability to organise, apply and communicate information to others in ways appropriate to the situation
- The ability to synthesise and build upon existing information, contributing to the creation of new knowledge

Following publication of the task force paper, a conference run by SCONUL on the same theme attracted over a hundred delegates from HE institutions as delegates looking for ways to deliver information skills to large and diverse cohorts of students.

For the sector there is currently a JISC supported project, The Big Blue, titled Information skills for students: a survey of present practice and a blue print for the future. The project is surveying the HE and FE sectors and will deliver models and case studies. It will be important to look for the report resulting from this project.

The international information skills picture

One of the best known skill sets from the US is Eisenberg and Berkowitz's (1990) Big 6. The Marland skills are visible in the set which include: Task definition; Information seeking strategies; Location and access; Use of information; Synthesis; Evaluation. This model has become a commercial enterprise, you can learn the skills and get the T-shirt!

New descriptors have begun to appear as competency based models define information competency in Goetsch and Kaufman's paper setting information alongside readin', writin' and arithmetic as a basic skills component in the university curriculum in Tennessee.

From South Africa, Olen (1998) shows that information literacy, another term now in vogue, and the virtual library are on the agenda at the University of South Africa. The same institution, which is a distance learning institution, delivers a module in research information skills developed by its Department of Information Science in collaboration with library services. Fourie and van Niekerk (1999) document the portfolio required for assessment of the module.

Work on information skills is offered from Australia by Cribb and Woodall (1997), who have created an interactive information skills programme for engineering students. Canada is also experiencing the need to develop information skills, researching teacher approaches and looking at teacher attitudes and

teaching methods. Not surprisingly because of its origins, the Cooperative Programme Planning & Teaching (CCPT 1997) developed in Canada is focussed on teaching in preference to learning.

All the above models provide a significant introduction to information handling skills. Both nationally and internationally Library Associations, schools, colleges and universities are looking at ways to develop the range of student skills to enable staff and students to enter the 21st Century with the skills to manage the information that they need to access to succeed.

The WOLF module

Having researched the field and reviewed a range of skills models the project group focussed on the SCONUL model as a useful starting point for the final stage of the project. The seven headline skills have been shaped into the Wolverhampton Online Learning Framework (WOLF) allowing staff in the department to consider a way forward with a mix of generic and customised skills. Delivery of the skills to 'locate and access' are well developed already in the materials in use in the Department of Learning Resources, some of the materials encourage evaluation. This may be the time to add the remainder of the skill set to the student learning in conjunction with school colleagues and study skill tutors to ensure added value to the student experience.

Successful outcomes

One of the well voiced recommendations from SCONUL and others is that the only way forward is by collaboration between academic, library and staff development colleagues. There are issues of concern about the integration versus add-on models for delivery of information skills development, the former necessitating a collaborative approach to curriculum design. The SCIT model at Wolverhampton shows the skills development integrated into the student's first semester programme, similarly integrated presentations exist in some but not all other schools. The acceptance of two research project bids as part of the University's Strategy for Learning and Teaching has raised the profile of information skills and facilitated the commencement of an ongoing dialogue that can lead to wider collaboration with academic staff. Accepting that to find time in a full and busy curriculum is not always easy learning centre staff are also planning to supplement current work by offering a programme of sessions introducing new resources.

Unexpected outcomes

The project was planned as desk-based research to inform future developments in the Learning Resources Department and enhance the level of collaboration with academic colleagues. It has provided the groundwork to enable learning resources staff to offer support for the planning, organisation and delivery of an autumn conference. This will be supported by the West Midlands branch of the University and Colleges Research Group (UC&R) of the Library Association. The conference was planned for November 2001, with the theme of Information Skills in a Virtual Environment.

Future Developments

The University of Wolverhampton has learning resources staff with highly developed information skills. Many are already dedicated to developing elements of this skill set for students. The skill set should be expanded and developed, customised and formalised to ensure that the student experience is enhanced by the handing over of information skills, from librarians well qualified in the field, to the students who need to learn them. Staff will need to ensure that they keep abreast of developments in the delivery of learning and teaching at the university to ensure that they can take a proactive role in student learning.

Collaboration between learning resources staff and their academic colleagues will be needed to ensure that time is available to take this work forward. Enabling mechanisms are needed to ensure that curriculum design allows for skills development. The pay off for the institution should be visible in the quality of the student experience and should aid the retention of students who may not have developed this set of skills prior to entering the institution.

A successful information skills agenda should ensure that students from the University of Wolverhampton have the skills to fulfil their own potential and succeed in their chosen courses and are ready to take their place in the information society of the 21st Century.

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